

APPARATUS CAPABLE OF PERFORMING BOTH BLOCK-MATCHING MOTION COMPENSATION AND GLOBAL MOTION COMPENSATION AND METHOD THEREOF

Abstract

An interpolation unit receives an incoming video bit stream comprising a plurality of frames including first macroblocks encoded using block-matching motion compensation and second macroblocks encoded using global motion compensation. A translation unit converts global motion parameters included in a current frame of the incoming video bit stream into a global motion vector. The interpolation unit performs luminance and chrominance interpolation operations on each macroblock contained in each frame of the incoming video bit stream. When processing a current macroblock, if the current macroblock is encoded using global motion compensation, the interpolation unit performs the luminance interpolation operations according to the global motion vector at half-pel resolution, and performs the chrominance interpolation operations at quarter-pel resolution. If the current mac-

robblock is encoded using block-matching motion compensation, the interpolation unit performs the luminance and chrominance interpolation operations according to the macroblock motion vector contained in the current macroblock at half-pel resolution.